

ABSTRACT OF THE DISCLOSURE

Computer-implemented methods, programs and apparatus for generating a library design for a combinatorial library of materials. A library design includes a set of sources representing components to be used in preparing the combinatorial library, destinations representing arrangements of cells and mappings, defining one or more distribution patterns for assigning components to cells in the destination arrangement or arrangements. Mappings include gradients and sets of user-defined equations, and are used to calculate the amount of one or more components to be assigned to a cell or cells in an arrangement. A library design can also include one or more process parameters defined to vary over time or across a plurality of destination cells. The invention outputs a data file defining the library design, including electronic data representing the sources, the destinations and the mapping, in a format suitable for implementing manually or using automated material handling apparatus.

10

15

50000302.doc